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Working With Interdisciplinary Teams Of Boundary Spanners: The Challenges And Potential For Adult Education

Meg Wise
Michelle Glowacki-Dudka

Abstract: Innovative research and development for holistic adult on-line health education (eHealth) is increasingly conducted by interdisciplinary teams of boundary spanners in grant-funded academic institutes. Typically, these teams include fields that represent the whole person with an illness in their social and technological context: medicine, nursing, social and counseling psychology, social work, systems engineering, and the communications and information sciences. However, adult education does not typically sit at these collaborative research tables. This paper uses a case example of a sole adult educator working in such a setting to explore how adult education fits into this new boundary-spanning field of practice and scholarship.

Introduction

Innovative research and development for adult lifespan and life skills education is increasingly conducted by interdisciplinary teams of boundary spanners. For example, holistic online education (eHealth) to help adults live well in the face of chronic or life-threatening illness often involves collaboration between the fields of medicine, nursing, social and counseling psychology, social work, systems engineering, anthropology, sociology, and communications and information sciences. Similarly, eHealth research and evaluation methods span methodological and epistemological boundaries that integrate qualitative, quantitative, and observational methods as well as scientific, critical, and constructivist perspectives. Typically, this collaborative research occurs in multi-disciplinary academic research centers funded by federal and foundation research grants. Despite tight budgets, funding continues to grow for basic and applied eHealth research and development—as it is high priority among groups with a variety of interests—from patient advocacy to health cost containment—and a graying and more illness-prone population is running on a collision course with shrinking healthcare resources and increasing Internet use. Research initiatives address questions, such as: How can we expand technological capacities to address the holistic needs of patients and their families? How can eHealth improve communication between clinicians, patients, and families? How do different technological and educational components facilitate cognitive, psychosocial, and behavioral learning processes associated with health crises? How can we as a society close the digital divide by making eHealth programs linguistically and culturally competent for diverse populations and expanding access to technology?

Certainly, these are classic adult education practitioner priorities and research questions. However, adult education does not *typically* sit at these interdisciplinary eHealth research tables—thus begging us to ask, “Why not? Don’t our transformative, cognitive, and critical learning theories; varied research and evaluation methods; and inclusive and collaborative

practice position us well to be full players in developing and evaluating innovative eHealth programs that address the technical, socioeconomic, existential and behavioral learning issues associated with serious illness (an inevitable and often life-transforming disorienting dilemma)? Isn't our work in using technology in distance education relevant?" Of course they are! But does adult education bring a *unique* body of knowledge, skills, and practice to these interdisciplinary teams of scholars and practitioners who already push the margins of their respective disciplines? Furthermore, do we sit close enough to the power source of the resource-rich eHealth funding sources or the academies in which reside? This paper addresses the first of these issues from our joint perspectives on the experience of the first author (Wise), who has worked over the past decade in several capacities with an interdisciplinary eHealth research and development project—during which time this masters-prepared library and public information specialist obtained a doctor of philosophy (Ph.D.) in Continuing and Adult Education.

Research Questions and Methods

Our specific research questions include: "What can adult educators *uniquely* bring to an interdisciplinary team of innovative boundary spanners—where team members *already* share and practice cross-perspective integration and transformational learner-centered philosophies to address complex and costly social issues? Notably, we do *not* address what we could bring to *traditional* adult education settings with narrow expert-defined behavioral learning foci. We first flesh out the above case study. Next, we identify factors of how adult learning theory, research, and practice converge and diverge with those of other disciplines involved in teaching adults (such as nursing, psychology, and systems engineering). Third, we analyze how these factors *can* position adult education in this new paradigm.

Meg's Field Notes

I am the sole adult educator at the Comprehensive Health Enhancement Support System (CHESS), a multi-disciplinary research project, at the University of Wisconsin-Madison. We develop and evaluate innovative online programs to facilitate holistic learning for patients and families as they face the inevitable and uninvited adult life task chronic or life-threatening illness. CHESS, which has been entirely supported by federal and foundation grants, was started by an industrial engineer in the 1980s to improve healthcare delivery systems. It was thought that patients knowledgeable about their illness, options, and the healthcare system could force needed system improvements and equalize the power asymmetry between doctors and patients. Moreover, anytime access to information and support would help people deal with existential issues and live life more fully despite their illness (Gustafson et al., 1993). CHESS programs for HIV/AIDS, breast cancer, heart disease, and asthma provide information in a variety of formats about the technical, financial, and psychosocial facets of the illness; guided decision aids and action plans; personal narratives; coaching on how to ask questions and demand answers; behavioral self-tracking and feedback tools; and on-line expert and peer support. Program development is driven by findings from focus groups, interviews, and surveys with patients, family members, partner/spouses, advocacy groups, and healthcare professionals. Randomized controlled evaluation studies in people's homes (computers supplied as needed) suggest that CHESS improves overall quality of life, participation in health decisions, and health behaviors, and reduces use of expensive healthcare services—such as hospitalization (Gustafson et al.,

1999). How does all this come about? Collaboration across disciplines and organizations; communication between the clients (as the foremost teachers) and professionals—and anticipating and setting trends in technology, health and funded research initiatives! As a result of this deeply respectful collaboration, creative innovation and academic excellence, CHESS was recently awarded one of four highly competitive and prestigious grants from the National Cancer Institute to develop a Center of Excellence in Cancer Communication for program development, evaluation research, cross-cultural dissemination, and training new scholars in the field.

Who's at the Multi-disciplinary Table and Where's Adult Education?

The CHESS PI, a professor of industrial engineering, leads an interdisciplinary team that represents all facets of the illness experience. Faculty and academic research staff includes researchers and practitioners from nursing, medicine, health policy and economics, mass communication, instructional design and psychology, marketing, social work, and library and information science. I joined the team as a masters-prepared library and information specialist with experience in packaging and interpreting technical information for public health information campaigns and community organizing around health and environment concerns—and a passion for patient empowerment and integrating the psychosocial experience and alternative health paradigms into scientific medicine. After years of developing programs and *supporting* evaluation research, publication, and grant writing, I enrolled in the Department of Continuing and Vocational Education's Ph.D. program to explore my own research questions—how does holistic learning unfold in the face of a life-threatening illness across a range of social conditions? Thus, almost by accident, the CHESS project has a doctorate-level adult educator. However, nationally Adult Education is not represented in the growing eHealth field – neither in academics, nor in the private sector. (Nursing, medicine, psychology, journalism and mass communications, and engineering are the major players). In the next section we examine possible reasons for why adult education is not a national player in cutting edge research and development in what may well be the biggest area of self-directed and formal adult life-span learning as an aging population run into a collision course with shrinking healthcare service and increasing use of Internet and other communication technologies.

Findings

Our analysis has identified several factors that disadvantage adult education in the research grant games. First, adult education sits far from the power centers of the resource-rich academic and federal funding agencies that support eHealth and patient education research—for instance adult education professors don't sit on National Institutes of Health review panels for patient education and eHealth grant proposals (including those targeting underserved population or encouraging qualitative research). Second, health education has long been the domain of *board certified* health fields—such as medicine, nursing, psychology, and physical therapy—which traditionally have used an expert-driven model to deal with the technical and behavioral aspects of illness. Notably, however, with mind-body integrative medicine and emphasis on interdisciplinary healthcare teams, it is widely acknowledged that narrow technical approaches to patient education is too limited and thus do not produce the desired outcomes. Third, and the focus of this paper, is that adult education is *perceived* to lack a *unique and rigorous* body of knowledge, skills, and research methods compared to afore-mentioned fields,

which now include client-centered approaches, narrative therapy, and qualitative research methods to help adults live well with serious illness.

Figure 1 shows our *Boundary Spanning* model of how scholars integrate their disciplinary knowledge and multiple perspectives to address a common social phenomenon—this synergy leads to a new field with a richer picture than the sum of individuals' contributions. Four levels (or facets) usually, but not always, follow a timeline of gaining expertise in the field. *Technical knowledge* (level 1) constitutes the theory and practice of *reflection and mentoring* (level 3) and *boundary spanning* (level 4), developed via *traditional practice* (level 2) at entry and early career levels.

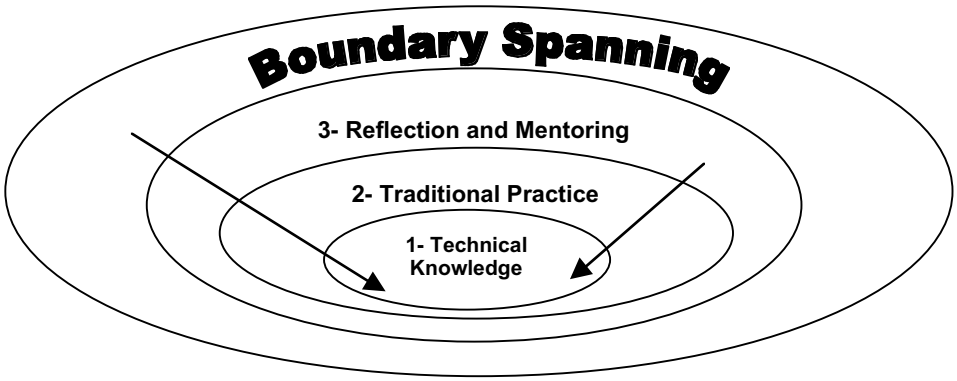

Figure 1: Model of Professional Development and Practice in Interdisciplinary Collaboration

Typically acquired during training, core technical knowledge and skills uniquely identifies and distinguishes a discipline or profession. We refer to this as the "nugget," or "secret" knowledge base that admits a person into the profession's membership and provides his or her area of expertise at an interdisciplinary table. Because collaboration partners should bring something unique and of value to the table, we provide a comparative analysis of the core technical knowledge and skills set of the fields that do collaborate on CHESS.

Physicians were trained to diagnose and treat illness, provide empathic care in delivering bad news, and help patients understand treatment options and choose according to one's values. They got into and endured medical school and years of internship and further specialized residency training, and passed a set of boards. Continuing medical education (CME) is required to keep up with a rapidly changing research/practice landscape and expanding expectations of patients schooled and supported by numerous patient advocacy groups, 24/7 access to information, and alternative mind-body health movement. Nurses were trained to teach patients and families how to anticipate and deal with the physical and emotional aspects of illness, how to assist doctor-patient communication and clinical care, and to hook patients up with needed social services. They also passed a board certification exam. Psychologists' core PhD training requires applying literatures of lifespan development, cognitive and behavioral learning processes, and experimental psychology to a variety of health, counseling and other clinical approaches, and an internship. They must master a range of survey, interview, and observational research methods and pass board certification. Of the non-clinical fields, mass communication scientists are trained to understand and test how mass media techniques shape public opinion in general and, more specifically, about health issues. Their training also occurs in other departments— primarily

sociology, industrial engineering, nursing, and psychology and requires advanced quantitative methods sufficient to design and conduct population-wide research studies; qualitative research methods are also encouraged. Industrial engineers are rigorously trained in mathematics and systems engineering as well as several social sciences, such as psychology, sociology, business management and quality improvement. They must also master several group processes and other qualitative research methods—some students have completed qualitative research dissertations. (Are we dashing any assumptions, yet?)

Wise represents two fields that are not *typically* represented on eHealth teams. As a masters-prepared Library and Information specialists, I was trained to organize information, retrieve and deliver information relevant to clients' and community needs; program development and evaluation; and ethics (First Amendment, privacy, etc.). Like Adult Education, disciplinary knowledge was assumed from prior fields of study and work (my background: broad liberal arts with Anthropology major). In the adult education doctoral program, my core training was in adult teaching and learning theories and philosophy, program planning and leadership (including critical reflection, collaboration, and boundary spanning), and research and evaluation methods. However, because of my focus on learning through illness—half my coursework was in nursing (resilience and existential learning in the face of suffering, women's health issues throughout the lifespan, illness narrative, public health advocacy in underserved populations, and grounded theory research seminars), psychology (lifespan development theories, narrative life history, interplay between emotional experience, cognition and physiology), and sociology (survey design and research). Notably, learning issues addressed in those courses overlapped with and complemented those of adult education—the same authors (Bandura, Freiere, Foucault, hooks, Senge, Sternberg, and others were assigned across the disciplines). However, research seminars—and especially *qualitative* methods in the other departments were more rigorous, as doctoral students had much more of a hazing experience from their fellow students and faculty.

In sum, fields collaborating in the CHESS project share several similarities in their core knowledge, skills, and philosophical base. They all espouse a patient/client/learner-centered approach and encourage integrating and applying theory from several disciplines. Increasingly, classically statistical fields include qualitative research. However, the real-world and bottom-line constraints of the traditional work setting often limit new practitioners' ability to adhere to the ideals of patient/client/learner centeredness gained in their core training (*Traditional Practice* level of our model). Thus, natural boundary spanners (who tend to push the status quo) often seek opportunities to use their skills in less traditional settings. For instance, I questioned the assumptions and power relationships behind who (Dewey and Library of Congress?) got to define the categories and "proper houses" of knowledge and left the reference desk to empower people who would never set foot in a traditional library with needed information. Likewise, CHESS team members push the boundaries of their disciplinary core to address wider social issues—that require multiple perspectives! Thus, a professor of Nursing is an expert in how people use and navigate eHealth systems at various stages of recovery. What borders has she crossed? Systems engineering, information sciences, and health psychology and others—her doctoral students' core knowledge incorporates this cross-disciplinary collaboration. Finally, our findings also suggest that adult education's core body of knowledge and skills is more accessible to outsiders than that of the other fields. After all, everyone teaches and has a practice-based theory on how best to do so. The lifelong learning movement further demystifies our core knowledge base. Our *core* knowledge base is not particularly unique—we borrow from psychology, quality improvement (management and systems engineering), and critical theory

(sociology)—we offer synthesis—but it becomes less unique in cross-disciplinary settings. Finally, our artifacts of membership fully extend our respect for learners to our students. However, if academic hazing toughens people to succeed in competitive publishing and granting games, could our softer approach deal us out of the high-stakes eHealth game?

Implications for Adult Education

So, what do adult educators uniquely bring to a table of interdisciplinary boundary spanners? Maybe not so much! The eHealth research and development enterprise is, after all, growing without major input from Adult Education. However, we believe that as a field, we cannot afford to sit at the sidelines of one of the fastest growing adult lifespan learning enterprises. We believe that an adult education perspective can contribute to CHESS' national leadership in eHealth with the following observations and caveats.

First, all eHealth fields are increasingly interdisciplinary, but Adult Education is more so at its technical core (or "nugget"). As a weakness, it means we are less unique. However, on the strength column, the field benefits from the prior academic and workplace backgrounds of its doctoral students. (While medical students come from pre-med, Adult Education students come from many places—e.g., Wise came from Anthropology and Library Science; Glowacki-Dudka from Business and Program Development). Thus, we may naturally hold multiple and polar perspectives on learning: the sociological and psychological; cognitive, behavioral and constructivist; and critical and humanistic. The caveat: We must be humble enough to recognize that we may trade depth and profundity at either pole for the privilege of the bird's eye, wide-angle view. Moreover, we must give up the notion that other fields are parochial—e.g., that psychologists do not embrace the sociological. Second, all eHealth fields espouse a patient/client centered philosophy—they *understand* that people bring their aspirations, life experience, and skills to an illness challenge. However, these fields are relatively new at this perspective and are not as deeply grounded in balancing assets and deficits. Adult education thus can strengthen and advocate more cogently for this perspective—and bring teaching/learning skills to the table.

Finally, we must take seriously the perception that we lack rigor. Like Cervero (1992), we hope that we would focus as much on outcomes as on process. Specifically, we call upon the field to embrace a stereoscopic and holistic perspective of research methods. We must give up parochial demonizing of hard outcomes, statistical methods, and theory-driven hypothesis testing. The National Institutes of Health encourages integrating qualitative and quantitative perspectives in an iterative fashion—but qualitative research must demonstrate a clear rationale for sample selection, interview questions, analysis methods, and how the data support findings, models and conclusions. Our training should ensure proficiency in research design and grant proposal writing. This intellectually challenging skill is essential to compete for funding to conduct innovative research that pushes the margins of understanding and facilitating holistic adult learning amidst the disorienting dilemma of living with a life-threatening illness.

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Meg Wise, Ph.D., Assistant Scientist, University of Wisconsin, 610 Walnut Street—1126, Madison, WI 53705; mewise@wisc.edu.

Michelle Glowacki-Dudka, Ph.D., Assistant Professor, Ball State University, 4610 S. Burlington Drive, Muncie, IN 47302; shelly@earthit.com

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